

### **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application:

#### **Listing of Claims:**

Claim 42 (Currently Amended): A method for ~~use in a flow matrix, which utilizes detecting an analyte in a sample in a flow matrix by use of biospecific affinity reactions to detect an analyte in a sample, and reaction,~~ which method comprises:

i. allowing ~~the sample comprising the analyte and~~ an analytically detectable reactant (Reactant\*) and a sample comprising the analyte to migrate through flow channels in a flow matrix to a detection zone (DZ) located in the matrix, in which there is a firmly anchored biospecific affinity reactant (Capturer), and

ii. capturing the Reactant\* in the DZ in an amount related to the amount of analyte in the sample,

wherein

A) the Reactant\* has labeled particles as an analytically detectable group,  
and

B) the Capturer is anchored to the matrix by immobilized particles which exhibit hydrophilic groups on their surface, wherein the particles anchoring the Capturer have a diameter smaller than a smallest inner dimension of the flow channels of the flow matrix and do not interfere with detection of Reactant\* in the detection zone.

Claim 43 (Previously Presented): The method according to claim 42, wherein immobilization of a biospecific affinity reactant by covalent binding is to the hydrophilic groups on the Capturer particles.

Claim 44 (Currently Amended): The method according to claim 42, wherein ~~immobilization of~~ a mixture of biospecific affinity reactants is immobilized to the hydrophilic groups on the Capturer particles.

Claim 45 (Currently Amended): The method according to claim 42, wherein ~~immobilization of~~ a mixture of biospecific affinity reactants found in allergen extracts is immobilized to the hydrophilic groups on the Capturer particles.

Claim 46 (Currently Amended): The method according to claim 42, wherein ~~immobilization of~~ a mixture of biospecific affinity reactants found in biological material used to detect autoantibodies is immobilized to the hydrophilic groups on the Capturer particles.

Claim 47 (Previously Presented): The method according to claim 42, wherein the hydrophilic groups are hydroxy, carboxy, amino or sulphonate groups.

Claim 48 (Previously Presented): The method according to claim 42, wherein the analyte is an antibody of IgE or IgG type with specificity to allergens.

Claim 49 (Previously Presented): The method according to claim 42, wherein the analyte is an antibody of IgG, IgM or IgA type with specificity to autoantigens.

Claim 50 (Previously Presented): The method according to claim 42, wherein the particles anchoring the Capturer have a size in the range of 0.1-100  $\mu\text{m}$  and the flow channels of the matrix have a smallest inner dimension in the range of 0.4-100  $\mu\text{m}$ .

Claim 51 (Previously Presented): The method according to claim 42, wherein the particles which anchor the Capturer have a size in the range of 0.1-1000  $\mu\text{m}$ .

Claim 52 (Previously Presented): The method according to claim 42, wherein the particles which anchor the Capturer have a size in the range of 0.1-100  $\mu\text{m}$ .

Claim 53 (Previously Presented): The method according to claim 42, wherein the labeled particles in the Reactant\* have a diameter in the range of 0.01-5  $\mu\text{m}$ .

Claim 54 (Previously Presented): The method according to claim 42, wherein the flow channels have a smallest inner diameter in the range of 0.4-1000  $\mu\text{m}$ .

Claim 55 (Previously Presented): The method according to claim 42, wherein the flow channels have a smallest inner dimension in the range of 0.4-100  $\mu\text{m}$ .

Claim 56 (Previously Presented): The method according to claim 42, wherein the labeled particles are fluorescent or coloured.

Claim 57 (Previously Presented): The method according to claim 42, wherein the Reactant\* is predeposited in the matrix upstream of the DZ.

Claim 58 (Previously Presented): The method according to claim 57, wherein the Reactant\* is predeposited in the matrix upstream of a sample application site.

Claim 59 (Previously Presented): The method according to claim 42, wherein the particles which anchor the Capturer to the matrix are a synthetic polymer, a semisynthetic polymer or a biopolymer, which on its surface exhibits hydrophilic groups.

Claim 60 (Currently Amended): The method according to claim 42, wherein the Reactant\* is captured in the DZ by formation of a ternary complex of Reactant'-analyte-Reactant\*, wherein the Reactant\* binds to the analyte simultaneously or in sequence and Reactant' is the firmly anchored Capturer or a reactant to which the Capturer binds ~~is capable of binding~~ by biospecific affinity.

Claim 61 (Previously Presented): The method according to claim 60, wherein the analyte is an antigen and the Reactant' and Reactant\* are antibodies with specificity for epitopes on the analyte.

Claim 62 (Previously Presented): The method according to claim 42, wherein the method is performed in connection with diagnosing allergy or autoimmune disease.

Claim 63 (Previously Presented): A test kit when used for performing analytical methods in a flow matrix, which methods utilize biospecific affinity reactions to detect an analyte in a sample, which kit comprises (i) a flow matrix having a detection zone (DZ), in which there is a firmly anchored biospecific affinity reactant (Capturer), and (ii) and analytically detectable reactant (Reactant\*),

wherein

- A) the Reactant\* has labeled particles as an analytically detectable group, and
- B) the Capturer is anchored to the matrix by immobilized particles which exhibit hydrophilic groups on their surface, wherein the particles anchoring the Capturer have a diameter smaller than a smallest inner dimension of the flow channels and do not interfere with detection of Reactant\* in the detection zone.

Claim 64 (Previously Presented): The kit according to claim 63, wherein immobilization of a biospecific affinity reactant by covalent binding is to the hydrophilic groups on the Capturer particles.

Claim 65 (Previously Presented): The kit according to claim 63, wherein immobilization of a complex mixture of biospecific affinity reactants is to the hydrophilic groups on the Capturer particles.

Claim 66 (Previously Presented): The kit according to claim 63, wherein immobilization of a complex mixture of biospecific affinity reactants found in allergen extracts is to the hydrophilic groups on the Capturer particles.

Claim 67 (Previously Presented): The kit according to claim 63, wherein immobilization of a complex mixture of biospecific affinity reactants found in biological material used to detect autoantibodies is to the hydrophilic groups on the Capturer particles.

Claim 68 (Previously Presented): The kit according to claim 63, wherein the hydrophilic groups are hydroxy, carboxy, amino or sulphonate groups.

Claim 69 (Previously Presented): The kit according to claim 63, wherein the analyte is an antibody of IgE or IgG type with specificity to allergens.

Claim 70 (Previously Presented): The kit according to claim 63, wherein the analyte is an antibody of IgG, IgM or IgA type with specificity to autoantigens.

Claim 71 (Previously Presented): The kit according to claim 63, wherein the particles anchoring the Capturer have a size in the range of 0.1-100  $\mu\text{m}$  and the flow channels of the matrix have a smallest inner dimension in the range of 0.4-100  $\mu\text{m}$ .

Claim 72 (Previously Presented): The kit according to claim 63, wherein the particles which anchor the Capturer have a size in the range of 0.1-1000  $\mu\text{m}$ .

Claim 73 (Previously Presented): The kit according to claim 63, wherein the particles which anchor the Capturer have a size in the range of 0.1-100  $\mu\text{m}$ .

Claim 74 (Previously Presented): The kit according to claim 63, wherein the labeled particles in the Reactant\* have a diameter in the range of 0.01-5  $\mu\text{m}$ .

Claim 75 (Previously Presented): The kit according to claim 63, wherein the flow channels have a smallest inner dimension in the range of 0.4-1000  $\mu\text{m}$ .

Claim 76 (Previously Presented): The kit according to claim 63, wherein the flow channels have a smallest inner dimension in the range of 0.4-100  $\mu\text{m}$ .

Claim 77 (Previously Presented): The kit according to claim 63, wherein the labeled particles are fluorescent or coloured.

Claim 78 (Previously Presented): The kit according to claim 63, wherein the Reactant\* is predeposited in the matrix upstream of the DZ.

Claim 79 (Previously Presented): The kit according to claim 78, wherein the Reactant\* is predeposited in the matrix upstream of a sample application site.

Claim 80 (Previously Presented): The kit according to claim 63, wherein the particles which anchor the Capturer to the matrix are a synthetic polymer, a semisynthetic polymer or a biopolymer, which on its surface exhibits hydrophilic groups.

Claim 81 (Previously Presented): The kit according to claim 63, wherein the Reactant\* is captured in the DZ by formation of a ternary complex of Reactant'-analyte-

Reactant\*, wherein the Reactant\* binds to the analyte simultaneously or in sequence and Reactant' is the firmly anchored Capturer or a reactant to which the Capturer is capable of binding by biospecific affinity.

Claim 82 (Previously Presented): The kit according to claim 81, wherein the analyte is an antigen and the Reactant' and Reactant\* are antibodies with a specificity for epitopes on the analyte.

Claim 83 (Previously Presented): The kit according to claim 63, wherein the method is performed in connection with diagnosing allergy or autoimmune disease.